LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-2 (canceled).

3. (previously presented) Method according to claim 15, wherein the remote ground station is connected to the central clock via a frequency division multiple access (FDMA) method.

4. (previously presented) Method according to claim 15, wherein the remote ground station is connected to the central clock via a code division multiple access (CDMA) method.

5. (previously presented) Method according to claim 15, wherein the remote ground station is connected to the central clock via a time division multiple access (TDMA) method.

6. (previously presented) Method according to claim 15, wherein the remote ground station is connected to the central clock via one or more satellites.

7. (previously presented) Method according to claim 15, wherein the remote ground station is connected to a system of redundant central clocks via a multiplex method.

8. (previously presented) Method according to claim 15, wherein an arbitrary number of remote ground stations is connected to the central clock via a multiplex method.

9. (previously presented) Method according to claim 15, wherein an arbitrary number of remote ground stations is connected to a redundant system of central clocks via a multiplex method.

10. (previously presented) Method according to claim 15, wherein a transparent transponder is located on board the satellite.

11. (previously presented) Method according to claim 15, wherein a regenerative transponder is located on board the satellite.

12. (previously presented) Method according to claim 15, wherein the user is informed in digital form of the current state of the remote clock with respect to the central clock.

13. (previously presented) Method according to claim 15, wherein the user is supplied with a warning signal if the deviation of the remote clock with respect to the central clock exceeds a limit value.

14. (previously presented) Method according to claim 15, wherein the respective state of the remote clocks is available in the form of telemetry data at the central clock.

15. (currently amended) A method for synchronizing a remote clock to a central clock, the method comprising the steps of:

providing a central clock and a remote clock at separate locations;

connecting the central clock and the remote clock via a bi-directional, two-way satellite communication link, wherein both the central clock and the remote clock transmit and receive time signals respectively to and from the satellite;

the central clock and the remote clock determining measurement data,

by the central clock determining a time difference between the local time of ~~reception of a signal from~~ the remote clock and the time of the central clock when the central clock receives ~~receiving~~ a time signal carrying the local time of the remote clock ~~this signal transmitted by the satellite~~, and

by the remote clock determining a time difference between the local time of ~~reception of a signal from~~ the central clock and the time of the remote clock when the

remote clock receives a time signal carrying the local time of the central clock ~~receiving the signal transmitted by the satellite~~;

each of the central clock and the remote clock intermittently exchanging measurement data together with exchanging system related correction data; and

synchronizing the remote clock in state and rate to the central clock based on the measurement data and on system related corrections exchanged by the signals transmitted between the central and remote clocks.

16. (previously presented) The method of claim 15, further comprising the step of synchronizing the remote clock by operating a control loop in the remote clock, the operation being based on measurement data.

17. (currently amended) Apparatus for synchronizing a remote clock with a central clock, the apparatus comprising:

a central clock having a first bi-directional, two-way satellite communication link for the central clock and further comprising a first transmitting device for transmitting a signal to a satellite and a first receiving device for receiving a signal from a satellite;

a remote clock separated from the central clock having a second bi-directional, two-way satellite communication link for the remote clock and further comprising a second transmitting device for transmitting a signal to a satellite and a second receiving device for receiving a signal from a satellite;

circuitry in each of the central clock and the remote clock for determining measurement data, which data is comprised of the time difference

determined by the central clock between the local time of ~~reception of the signal transmitted by the satellite from~~ the remote clock and the time of the central clock when the central clock receives a time signal carrying the local time of the remote clock ~~receiving the signal transmitted by the satellite~~; and

determined by the remote clock between the local time of ~~reception of the signal transmitted by the satellite from~~ the central clock and the time of the remote clock when

the remote clock receives a time signal carrying the local time of the central clock ~~receiving the signal transmitted by the satellite~~;

a control loop in the remote clock for synchronizing the remote clock in state and rate to the central clock based on the measurement data and also on system related corrections exchanged by the signals transmitted between the central and remote clocks.